System 10 Plus

10 Input Configurable Switcher with Projector Control

FEATURES

- **250 MHz (-3dB) RGB video bandwidth**
- **Inputs: Configurable inputs for RGBHV, S-video, and composite video; stereo balanced/unbalanced audio inputs**
- **Outputs: One RGBHV, one S-video, and one composite video output; one balanced/unbalanced audio output**
- **Compatible with RGBHV, RGBS, RGsB, S-video, and composite video signals**
- **Triple-Action Switching™ for RGB delay** — Blanks the screen when the switcher switches to a new source, eliminating visible switching transitions.
- **Universal projector control via RS-232** — The System 10 Plus provides control for various projectors by using projector-specific communications adapters for connection to the model being used. Call Extron or check the Extron Web site for a list of current compatible projectors and part numbers.
- **Audio breakaway - available through RS-232 only**
- **Video Loop Back** — Route video sources through an optional Extron QSD 204 quad standard decoder or Extron DVS 304 scaler, so only one signal processing device needs to be used for all switcher inputs. This feature enables one set of RGB cables to feed the switcher's output signals to any projector.
- **Balanced/unbalanced audio** — Audio may be routed as balanced or unbalanced audio. Attenuation adjustments provided for each input.
- **RS-232 and contact closure remote control**
- **Backlit front panel buttons** — Buttons provided for input switching, display mute, display power, RGB mute, and audio mute. Display mute mutes the image at the projector, RGB mute mutes the image at the switcher and works for RGB signals only.
- **Front panel button labels** — Backlit pushbuttons can be custom-labeled with text or graphics printed using Extron's Windows®-based software.
- **Remote control capabilities with optional IR 301 Handheld IR Remote Control**
- **Input Expandability** — Switchers can be looped together for additional input capability.
- **3U, full rack width metal enclosure** — Rack-mounting brackets included.
- **Internal international power supply** — The 100-240VAC, 50/60 Hz, universal power supply provides worldwide power compatibility.

DESCRIPTION

The Extron **System 10 Plus** switcher with universal projector control accepts RGBHV, RGBS, RGsB, S-video, composite video, and stereo audio signals. The System 10 Plus provides 250 MHz (-3dB) video bandwidth, and is ideal for large-scale A/V systems integration and staging applications.

For audio switching, audio attenuation and audio breakaway are available. VLB - Video Loop Back is also supported, allowing the switcher to work with any external decoder or scaler. With the VLB method, only one signal processing device needs to be used in order to decode or scale all the switcher's input signals. System switcher control is provided via front panel operation, RS-232 control, contact closure control, or the optional IR 301 remote control.

MODEL	VERSION DESCRIPTION	PART #
System 10 Plus	10 Input Switcher	60-108-01

OPTIONAL ACCESSORIES	MODEL DESCRIPTION	PAGE	PART #
IR 301	Handheld IR Remote Control for the System 10 Plus	page 271	70-143-01
MCP 1000M	MCP - Matrix Control Panel	page 366	60-298-01
CC100' (100' / 30 m)	Male 15-pin HD Connector to Female 9-pin Connector	n/a	26-305-02
SVHSM-BNCF 8" (20 cm)	S-Video Male to 2 BNC Female Adapter	page 795	26-353-01
6 pole 5 mm captive screw connector	6 Pole Connector	page 754	10-163-01

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Extron®

System 10 Plus

SPECIFICATIONS

VIDEO

Gain	0 dB, unity
Bandwidth	250 MHz (-3 dB)
Differential phase error	0.01° at 3.58 MHz and 4.43 MHz
Differential gain error	0.01% at 3.58 MHz and 4.43 MHz
Crosstalk	-35 dB @ 10 MHz (typical)
Isolation	-55 dB @ 10 MHz (typical)

VIDEO INPUT

Number/signal type	10 RGBHV, RGBS, RGsB, S-video, or NTSC/PAL composite video
Connectors	(10) x 5 BNC female
Nominal level	1 Vp-p for Y of S-video and for composite video 0.7 Vp-p for RGB 0.3 Vp-p for C of S-video
Minimum/maximum levels	Analog: 0.3 V to 2 Vp-p TTL: up to 5 Vp-p
Impedance	75 ohms (deselected inputs)
Horizontal frequency	15 kHz to 150 kHz
Vertical frequency	30 Hz to 150 Hz
Return loss	<-25 dB @ 10 MHz

VIDEO OUTPUT

Number/signal type	1 RGBHV, RGBS, RGsB, or 1 S-video (NTSC/PAL), or 1 composite video (NTSC/PAL)
Connectors	5 BNC female (RGBHV/RGBS/RGsB) 2 BNC female (S-video) 1 BNC female (composite video)
Nominal level	1 Vp-p for Y of S-video and for composite video 0.7 Vp-p for RGB 0.3 Vp-p for C of S-video
Minimum/maximum levels	0.3 V to 2.0 Vp-p
Impedance	75 ohms
Return loss	-30 dB @ 5 MHz
DC offset	None
Switching type	Triple-Action™; 0 s to 7.5 s, adjustable

SYNC

Input type	RGBHV, RGBS, RGsB
Output type	RGBHV, RGBS, RGsB
Standards	NTSC and PAL
Input level	0.5 V to 5 Vp-p
Output level	0.5 V to 5 Vp-p, unterminated
Input impedance	510 ohms (deselected inputs)
Output impedance	75 ohms
Max input voltage	5 Vp-p
Input sensitivity	5 Vp-p
Polarity	Positive or negative (follows input)

AUDIO

Gain	Unbalanced output: 0 dB; balanced output: +6 dB
Frequency response	20 Hz to 20 kHz, ±0.05 dB
THD + Noise	0.015% @ 20 Hz to 20 kHz, worst case
S/N	>95 dB at maximum output
Crosstalk	<-85 dB @ 20 Hz to 20 kHz, fully loaded
Stereo channel separation	>60 dB @ 20 Hz to 20 kHz
CMRR	>60 dB @ 60 kHz

AUDIO INPUT

Number/signal type	10 stereo, balanced/unbalanced
Connectors	(10) 5 mm captive screw connectors, 6 conductor
Impedance	>10k ohms unbalanced, 20k ohms balanced, AC coupled
Nominal level	-20 dBV (100 mV), -10 dBV (316 mV), 0 dBu (0.775 V), or +4 dBu (1.23 V), configurable

NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu
+4 dBu and 0 dBu are professional audio line level standards.
-10 dBV and -20 dBV are semiprofessional, computer audio, and consumer audio standards.

Maximum level	+13.2 dBu, (balanced or unbalanced) at 1%THD+N
Input gain adjustment	-95 dB to 0 dB, adjustable per input

AUDIO OUTPUT

Number/signal type	1 stereo, balanced/unbalanced
Connectors	(1) 5 mm captive screw connector, 6 pole 2 BNC female
Impedance	50 ohms unbalanced, 100 ohms balanced
Gain error	±0.2 dB channel to channel
Maximum level (Hi-Z)	> +19.2 dBu, balanced or unbalanced at 1%THD+N
Maximum level (600 ohm)	> +19.2 dBm, balanced or unbalanced at 1%THD+N

CONTROL/REMOTE — SWITCHER

Serial control port	RS-232, 9-pin female D connector
Baud rate and protocol	9600 baud, 8 data bits, 1 stop bit, no parity
Serial control pin configurations	2 = TX, 3 = RX, 5 = GND
Remote key pad control	(1) 25-pin D female
IR controller module	IR-201 (optional), part #70-142-01; or IR-301 (optional), part #70-143-01
Program control	Extron's control/configuration program for Windows® Extron's Simple Instruction Set (SIS™)

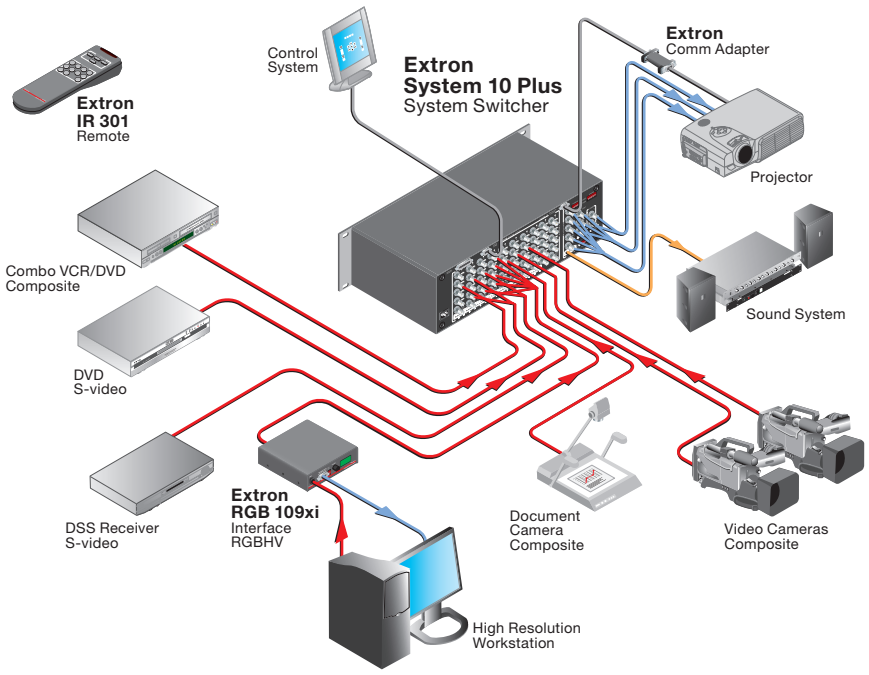
CONTROL — PROJECTOR

Projector control port	(1) 15-pin HD female

GENERAL

Power	90 VAC to 260 VAC, 50/60 Hz, 10 watts, internal, universal
Temperature/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Rack mount	Yes, with attached rack ears
Enclosure type	Metal
Enclosure dimensions	5.25" H x 17.5" W x 9.6" D (3U high, full rack wide) 13.3 cm H x 44.4 cm W x 24.4 cm D (Depth excludes connectors. Width excludes rack ears.)
Product weight	13.2 lbs (6.0 kg)
Shipping weight	20 lbs (9 kg)
DIM weight (International)	25 lbs. (12 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Listings	UL, CUL
Compliances	CE
MTBF	30,000 hours
Warranty	3 years parts and labor

NOTE: All nominal levels are at ±10%. Specifications are subject to change without notice.



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